Exercise, vitamins and respiratory tract infections : [Letter]

Hemilä, Harri

2007

Hemilä , H 2007 , ' Exercise, vitamins and respiratory tract infections : [Letter] ' , American Journal of Medicine , vol. 120 , no. 12 , pp. e17-e17 . https://doi.org/10.1016/j.amjmed.2006.11.025

http://hdl.handle.net/10138/228093
https://doi.org/10.1016/j.amjmed.2006.11.025

acceptedVersion

Exercise, vitamins and respiratory tract infections
[Letter to the Editor]

Hemilä H

American Journal of Medicine 2007;120:e17
Published version: **http://dx.doi.org/10.1016/j.amjmed.2006.11.025**

Pre-print version of the manuscript

Harri Hemilä, PhD, MD
Department of Public Health
University of Helsinki
Helsinki, Finland
harri.hemila@helsinki.fi
http://www.ltdk.helsinki.fi/users/hemila

To the Editor:
Chubak *et al.*[1] reported that moderate intensity exercise training reduced common cold incidence but had no effect on the total incidence of upper respiratory infections. As a motivation for the trial, they cited two randomized 3-4 month trials[2,3] which, however, did not find statistically significant effect on upper respiratory infection incidence from moderate exercise, but the studies were small ($N \leq 36$).

In their paper, Chubak *et al.* failed to refer to our study analyzing the relation between physical activity and common cold incidence in middle-aged Finnish men of the ATBC Study cohort (N = 14,401). Physical activity at work and at leisure had no association with common cold incidence.[4]

In Chubak's trial, less severe upper respiratory infections were classified as "the common cold", and the remaining episodes included "flu" and were, on average, more severe.[1] The etiology of these two groups is largely overlapping, but the difference in severity is important. There was no significant difference in the sum of episodes between the two treatment groups. However, according to Table 2, the severity of upper respiratory infections was considerably dissimilar in the two intervention groups. In the exercising group, the proportion of episodes classified as "the common cold" was 35% (23/65), whereas it was significantly higher in the stretching group, 67% (47/70) (P[2-t]=0.0004, Fisher's test). Consequently, the more severe episodes were substantially more frequent in the exercising group (65% vs. 33%), suggesting that exercise might, in fact, have caused harm by making upper respiratory infections more severe.

Finally, Chubak *et al.* mentioned the possibility that vitamins might affect the immune system, but they did not refer to controlled trials with physically active people. In the ATBC Study cohort, vitamin E had no effect on common cold incidence in those who had heavy physical activity at work or at leisure.[4,5] Nevertheless, in six placebo-controlled trials with participants under heavy acute physical stress (combined N = 642), vitamin C reduced common cold risk by 50% (95% CI: −34% to −62%).[5,6] Four of the trials studied marathon runners and thus the latter finding should be generalized cautiously.

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